[DISCUSSION DRAFT]

119TH CONGRESS
1ST SESSION

H. R. _____

To require the National Highway Traffic Safety Administration to establish guidelines for advanced driver assistance systems calibration, modifications, and tolerances, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

Mrs. HARSHBARGER introduced the following bill; which was referred to the Committee on _____

A BILL

To require the National Highway Traffic Safety Administration to establish guidelines for advanced driver assistance systems calibration, modifications, and tolerances, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''ADAS Functionality and Integrity Act''.

SEC. 2. ADAS MODIFICATION RANGES AND TOLERANCES GUIDELINES.

(a) GUIDELINES FOR ADAS.—Not later than 24 months after the date of the enactment of this Act, the Secretary of Transportation, acting through the Administrator of the National Highway Traffic Safety Administration, in consultation with manufacturers of passenger motor vehicles and equipment, standard settings organizations, the independent automotive aftermarket, and dealers, shall develop and publish guidelines to ensure ADAS and vehicle dynamic systems installed in any passenger motor vehicle, for a model year on and after 2028 maintains functionality when a passenger motor vehicle is modified or customized that include the following:

(1) Allowable modification ranges and tolerances, including physical parameters impacting ADAS and vehicle dynamic systems functionality, including ride height, wheel and tire dimensions, overall static geometry, physical displacement parameters, and sensor and camera function.

(2) A process for manufacturers to provide vehicle tolerance and system sensitivity information relevant to modification and calibration to owners and the Administrator within 30 days after the release of a passenger motor vehicle.

(3) Quantifiable tolerance thresholds for changes in vertical and lateral displacement, in all axes, necessary to maintain proper ADAS functionality.

(4) Proper calibration procedures of ADAS and other vehicle dynamic systems following repair, modification, or component replacement.

(5) Confirmatory test protocols and performance validation metrics that allow owners, service providers, and independent repair facilities to verify the operational integrity of ADAS after calibration.

(b) CONTRACTING AUTHORITY.—The Administrator may contract with independent laboratories and vehicle testing facilities to carry out any testing that may be required to develop the guidelines under subsection (a).

(c) REQUIREMENT TO USE EMPIRICAL DATA.—Any determination made by the Administrator in issuing the guidelines required pursuant to subsection (a) shall be based on empirical data derived from dynamic testing, independent research, and public data sources.

(d) USE OF NCAP METHODOLOGIES.—The guidelines described in subsection (a)(4) shall reference or expand upon methodologies established by the United States New Car Assessment Program, including—

(1) a standardized scoring scale to evaluate the effectiveness of calibration (such as good, fair, and poor); and

(2) transparent validation criteria that can be applied across vehicle platforms and assessed over the lifecycle of the vehicle.

(e) ENFORCEMENT.—A manufacturer of a passenger motor vehicle or equipment that does not meet the guidelines issued pursuant to this section is subject to the civil penalties described under section 30165(a) of title 49, United States Code.

SEC. 3. ADAS MODIFICATION RANGES AND TOLERANCES STUDY.

(a) STUDY REQUIRED.—Not later than 12 months after the date of the enactment of this Act, the Secretary of Transportation, acting through the Administrator of the National Highway Traffic Safety Administration, shall complete a study and submit to Congress a report that assesses the safety needs, feasibility, capability, and cost to the National Highway Traffic Safety Administration to develop and maintain industry guidelines to support the functionality of ADAS and vehicle dynamic systems installed in passenger motor vehicles for a model year on and after 2028 after a passenger motor vehicle is modified

or customized. The study shall consider the development of industry guidelines relating to the following:

(1) Vehicle tolerance and system sensitivity information relevant to calibration following modification.

(2) Allowable modification ranges and tolerances for passenger motor vehicles, including physical parameters that impact ADAS and vehicle dynamic systems functionality, including ride height, wheel and tire dimensions, overall static geometry, physical displacement parameters, and sensor and camera function.

(3) Quantifiable tolerance thresholds for changes in vertical, longitudinal, and lateral displacement, in all axes, necessary to maintain proper ADAS functionality.

(4) Proper calibration procedures of ADAS and other vehicle dynamic systems following repair, modification, or component replacement.

(5) Confirmatory test protocols and performance validation metrics that allow owners, service providers, and independent repair facilities to verify the operational integrity of ADAS after calibration.

(b) STAKEHOLDER OUTREACH.—In carrying out the study required under subsection (a), the Administrator

shall consult with manufacturers of passenger motor vehicles and equipment, standard setting organizations, the independent automotive aftermarket, and dealers.

SEC. 4. DEFINITIONS.

In this Act:

(1) ADMINISTRATOR.—The term ''Administrator'' means the Administrator of the National Highway Traffic Safety Administration.

(2) ADVANCED DRIVER ASSISTANCE SYSTEMS; ADAS.—The term ''advanced driver assistance system'' or ''ADAS'' means a passenger motor vehicle equipped with a Level 0, Level 1 or Level 2 system.

(3) DEALER; MANUFACTURER.—The terms ''dealer'' and ''manufacturer'' have the meaning given those terms in section 30102 of title 49, United States Code.

(4) CONFIRMATORY TEST.—The term ''confirmatory test'' means a standardized post-calibration vehicle test designed to validate system performance.

(5) INDEPENDENT AUTOMOTIVE AFTERMARKET.—The term ''independent automotive aftermarket'' means any party or entity not authorized by a passenger motor vehicle manufacturer or affiliated service provider.

(6) LEVEL 0; LEVEL 1; LEVEL 2.—The terms ''Level 0'', ''Level 1'', and ''Level 2'' have the meaning given those terms in the April 2021 edition of the J3016 recommended practice of SAE International, ''Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles'', or any subsequent edition of J3016 adopted by the Secretary.

(7) MOTOR VEHICLE.—The term ''motor vehicle'' has the meaning given that term in section 32101 of title 49, United States Code.

(8) OWNER.—The term ''owner'' has the meaning given that term in section 30106(d)(2) of title 49, United States Code.

(9) PASSENGER MOTOR VEHICLE.—The term ''passenger motor vehicle'' has the meaning given that term in section 32101 of title 49, United States Code, including a motor vehicle with a gross vehicle weight rating of less than 10,000 pounds.

(10) SECRETARY.—The term ''Secretary'' means the Secretary of Transportation.

(11) VEHICLE DYNAMIC SYSTEM.—The term ''vehicle dynamic system'' means ADAS and any related or integrated systems affecting the stability, control, or motion of the vehicle.